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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,857	01/29/2004	Yosuke Ushigome	00862.023431	2621

5514 7590 11/15/2005

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EXAMINER	
FIDLER, SHELBY LEE	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,857	USHIGOME, YOSUKE	
	Examiner	Art Unit	
	Shelby Fidler	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-8 and 10-13* is/are rejected.

7)☒ Claim(s) *3 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/26/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-8, and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Horigome et al. (US 5631677).

With regards to claim 1, Horigome teaches a battery residual detection method in a printing apparatus (col. 2, line 54) operable with at least a battery power source (col. 3, lines 8-9), the method comprising:

a detection step of detecting a battery voltage thereby detecting a battery residual capacity while printing is performed on a printing medium (col. 7, lines 32-34) by reciprocate-scanning a printhead mounted on the printing apparatus (col. 5, lines 33-35);

a determination step of determining whether or not the battery residual capacity detected at the detection step is equal to or less than a predetermined threshold value (col. 8, lines 11-14);

a detection control step of controlling driving of a carriage motor to reciprocate-scan the printhead and driving of a conveyance motor to convey the printing medium so as to provide a time zone where a load on the carriage motor and that on the conveyance motor do not overlap in accordance with the determination result at the determination step (Figure 9 or col. 6, lines 59-65), and controlling the detection step so as to detect the battery residual capacity in the time zone where the loads do not overlap (step S208, Figure 6A).

With regards to claims 2 and 8, Horigome teaches that the conveyance motor is a stepping motor (col. 10, lines 15-18 show that the conveyance motor is driven by pulses, requiring the motor to be a stepping motor).

With regards to claims 4 and 10, Horigome teaches a detection control step including a drive control step of, if it is determined at the determination step that the battery residual capacity is greater than the predetermined threshold value (step S133, Figure 6B), controlling the driving of the carriage motor and that of the conveyance motor so as to provide a time zone where the carriage motor and the conveyance motor are simultaneously driven to increase a printing speed (step S135, Figure 6B shows that both motors are driven simultaneously for at least m pulses).

With regards to claims 5 and 11, Horigome teaches that the printing apparatus is also operable with an AC power source (col. 5, lines 6-9).

With regards to claims 6 and 12, Horigome teaches that the printhead is an inkjet printhead (col. 5, line 3).

With regards to claim 7, Horigome teaches a printing apparatus (col. 2, line 54) operable with at least a battery power source (col. 3, lines 8-9), comprising:

a carriage motor to generate a driving force (col. 4, line 48) to reciprocate-scan a carriage holding a printhead (col. 5, lines 33-35);

a conveyance motor to generate a driving force to convey a printing medium (col. 4, lines 50-51);

detection means for detecting a battery voltage thereby detecting a battery residual capacity (col. 6, lines 12-14) while printing is performed by the printhead on the printing medium by reciprocate-scanning of the carriage (col. 7, lines 32-34);

determination means for determining whether or not the battery residual capacity detected by the detection means is equal to or less than a predetermined threshold value (col. 8, lines 11-14); and

detection control means for controlling driving of the carriage motor to reciprocate-scan the printhead and driving of the conveyance motor to convey the printing medium so as to provide a time zone where a load on the carriage motor and that on the conveyance motor do not overlap in accordance with the determination result of the determination means (Figure 9 or col. 6, lines 59-65), and controlling the detection means so as to detect the battery residual capacity in the time zone where the loads do not overlap (step S208, Figure 6A).

With regards to claim 13, Horigome teaches that the inkjet printhead has an electrothermal transducer to generate thermal energy to be supplied to ink (col. 14, lines 16-18) for discharging the ink by utilizing the thermal energy (col. 14, lines 20-22).

Claim Objections

Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The primary reason for indicating allowable subject matter is the inclusion of the limitation of a time zone after excitation to stop the conveyance motor and before driving of the carriage motor.

The most pertinent prior art, Horigome et al. (US 5631677), teaches a time zone after excitation to stop the carriage motor and before driving of the conveyance motor.

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLF

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